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ARCHAEOLOGICAL ASSESSMENT
TECHNICAL GUIDELINES

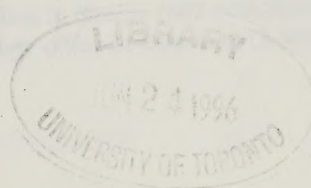
1993

CULTURAL HERITAGE RESOURCE CONSERVATION IN THE ONTARIO LAND USE
PLANNING PROCESS

ARCHAEOLOGICAL ASSESSMENT TECHNICAL GUIDELINES

1993

(Stages 1-3 & Reporting Format)



MINISTRY OF CULTURE, TOURISM & RECREATION
CULTURAL PROGRAMS BRANCH
ARCHAEOLOGY & HERITAGE PLANNING



RAG CONTENT

PREFACE

These technical guidelines were developed by the Ministry of Culture, Tourism & Recreation and the archaeological consultant community, through a series of workshops and consultations held between 1987 and 1993. In addition, comments were provided by municipal and provincial approval authorities, the development sector, and the archaeological community. This guideline was formally adopted by MCTR in 1993, and will be subject to periodic review by this Ministry and the archaeological community. For information on the plans review process, or to provide comments on the guideline, please contact staff of the Cultural Programs Branch, Archaeology & Heritage Planning Unit:

TORONTO:

77 Bloor St. West, 2nd Floor
Toronto, Ontario M7A 2R9
Phone: (416) 314-7080
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(Also For Data Co-ordinator;
Archaeological Licencing Officer)

LONDON (for Southwestern Ontario):

55 Centre Street
London, Ontario N6J 1T4
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The Ministry also maintains archaeological field offices in Kenora (807-468-2854) and Thunder Bay (807-475-1551), as well as a Marine Archaeology office in Ottawa (613-566-3731).

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SECTION 1 INTRODUCTION


These guidelines define the minimum field and reporting requirements for archaeological assessments conducted in advance of development. To ensure clarity and continuity, the different steps of an archaeological assessment have been identified as "Stages". As applied here:

- Stage 1 Refers to the background or pre-survey phase of an assessment.
- Stage 2 Refers to the actual field examination, and involves either surface-survey or test-pitting.
- Stage 3 Refers to those field activities conducted when archaeological remains are encountered during a Stage 2 survey. The purpose of Stage 3 work is to gather information which will be used to delineate and evaluate the significance of the site in question, in order to determine appropriate mitigation measures.
- Stage 4 Refers to mitigating the development impacts to archaeological sites, through site excavation or avoidance. This occurs once the field assessment has been completed, and the assessment report has been reviewed by MCTR.

Stage 2 and 3 investigations normally occur as part of the same field assessment. Stages 1, 2 and when applicable 3, represent those activities conducted prior to the production and submission of an assessment report to MCTR. The mitigation strategy to be followed during Stage 4 will be defined through the recommendations provided in that report, and through discussions between the archaeological consultant, property owner/developer, MCTR staff, and, where applicable, municipal planning staff. Guidelines for Stage 4 are currently being developed. For further information on the status of Stage 4 Guidelines, please contact the Ministry.

REGULATORY OBLIGATIONS

In order to undertake archaeological field work in Ontario, archaeological consultants must hold a current archaeological consulting licence issued by the Minister of Culture, Tourism & Recreation. As professionals, consulting archaeologists are expected to abide by the terms and conditions set out in their licences, as well as the relevant sections of the Ontario Heritage Act (RSO 1990) and Ontario Regulations 249/75 and 212/82. For example, consulting archaeologists are required to submit contract information forms for each project they undertake, and provide site registration and/or update forms for each archaeological site they encounter. If Assessment Reports are used to fulfil licence reporting obligations, the consultant must also ensure the report meets the requirements defined in the Ontario Heritage Act and its regulations. Copies of the relevant regulations and forms governing consultant archaeology are available from the



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Archaeological Licencing Office of the Ministry's Toronto Archaeology & Heritage Planning Unit.

ARCHAEOLOGY IN THE LAND USE PLANNING PROCESS

Cultural heritage resource conservation within the land use planning process in Ontario arises from legislation such as the Planning Act, Environmental Assessment Act, and Niagara Escarpment Planning & Development Act. In addition, various provincial land use agencies such as Ontario Hydro, the Ministry of Transportation, Management Board Secretariat, the Ministry of Natural Resources and Conservation Authorities also conserve cultural heritage resources associated with particular development projects.

Cultural heritage resource concerns in land use planning are addressed through MCTR's review of provincial and municipal planning policies and development projects. This review is conducted to determine whether cultural heritage resources may be adversely affected as a result of development. When archaeological concerns are identified through this review, the development proponent will be required to address them; usually by hiring an archaeological consultant to assess the lands in question.

Archaeological Assessment reports are reviewed by MCTR to ensure that cultural heritage concerns have been met, that the consulting archaeologist's activities have met the requirements identified in these guidelines and the Ontario Heritage Act, and that the archaeological resources found have been properly conserved. In those instances where sites have been found during the assessment, their Stage 3 evaluations are also reviewed. If the assessment report satisfies this review, the development proposal will be cleared of archaeological concerns, or Stage 4 mitigation recommendations will be commented on. However, if the work and resulting report are incomplete; do not meet the requirements of these guidelines; or indicate that archaeological resources found were not properly conserved, MCTR may require revisions to the report or additional field work be conducted, prior to clearance being issued or Stage 4 recommendations being approved.

SECTION 2

ARCHAEOLOGICAL ASSESSMENTS: PROCEDURES & METHODS

MCTR recognizes that many variables will influence an archaeologist's selection of a specific field strategy for each assessment project, based on his or her professional judgement and experience. If, however, a survey strategy does not meet the minimum requirements outlined below, the archaeologist must provide a detailed justification for the strategy selected in the resulting assessment report. Use of an unjustified field strategy can lead to delays in clearing a project.

STAGE 1 - ARCHAEOLOGICAL OVERVIEW/BACKGROUND STUDY

A Stage 1 background study provides the consulting archaeologist and Ministry report reviewer with information about the known and potential cultural heritage resources within a particular study area, prior to the start of the field assessment. As part of the Stage 1 background study, the consulting archaeologist shall:

- examine the National Site Registration Database to determine the presence of known archaeological sites in and around the project area. This information is available through the MCTR Data Co-ordinator,
- review the land use history and the present condition of the study area,
- talk to individuals with information regarding archaeological remains on the subject property.

The consulting archaeologist may also examine, as deemed appropriate:

- the geomorphological history of the land during the period of possible human occupation, in order to evaluate the potential for buried cultural deposits,
- any other historical, environmental, planning or archaeological data applicable for the subject lands.

The consulting archaeologist may also wish to review the development property with the appropriate MCTR development review officer, to determine if additional information regarding known and/or potential heritage resources is available for the project area.

STAGE 2 - FIELD ASSESSMENT

Stage 2 field assessments are intended to provide an inventory of all archaeological sites present on the subject property. As such, the following general provisions will govern the nature and extent of field assessments:

- The techniques used during assessment should be appropriate for finding both prehistoric and historic remains, and sites of all sizes.
- With the exception of lands of low potential or lands subject to previous, extensive disturbance, or where MCTR has agreed in advance to exempt specific portions of the subject lands from assessment, the entire development property must be surveyed.
- Assessments shall not be conducted under weather conditions which can inhibit the identification of sites and/or will result in the loss of data or damage to cultural material. For example, no surface surveys shall be conducted on lands covered by snow and no test pit surveys shall be conducted on ground frozen 3 cm or more below surface.
- Heavy machinery shall not be used in Stage 2 surveys except where the presence of sterile overburden or recent fill has been demonstrated. Techniques for finding sealed or otherwise deeply buried sites should be employed where high potential has been determined. In urban cores or built up areas, this can be done through monitoring of construction activities, subject to MCTR approving the particular monitoring strategy.
- When any unusual or exceptional situations arise in the field, the consulting archaeologist should review the matter with the MCTR development review officer, to determine an appropriate response to the situation.

Stage 2 Survey Methods

There are two basic survey methods acceptable for conducting a Stage 2 assessment of a development property: pedestrian (surface) and test pit survey. The use of either method is determined based on the nature and extent of ground cover.

Interval spacing for either method is based on a determination of moderate or high potential for the discovery of archaeological remains. While field judgement by the consulting archaeologist will determine exact areas of moderate and high potential, broad associations of the study area to physical and/or cultural-historical features will help define those areas of high potential in the survey area. Such features can include the following:

- Proximity to existing or former sources of water or shorelines;
- Rolling topography, well-drained soils and/or proximity to resource procurement areas;

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- Known archaeological sites or other heritage resources in the project area;
 - Cultural-historical features such as early transportation corridors, initial settlement areas, traditional use areas, etc.;
 - Reports from avocational archaeologists or local informants of potential archaeological or historical resources in the vicinity of the subject property.

The rationale for the determination of areas of moderate and high potential must be explicitly documented in the resulting assessment report. A consulting archaeologist unsure of potential determinations for a particular property should review the matter with the MCTR development review officer, prior to conducting the field assessment. Otherwise, and if in doubt, utilize the finer (ie. 5 metre) interval spacing. Improper determinations of potential will result in additional field work being required in order to satisfy the MCTR review of the assessment.

Pedestrian Survey:

All previously cultivated land shall be ploughed for pedestrian survey, rather than being subject to a shovel test pit survey. Where vegetation cover (eg. crop stubble, weed growth, etc.) limits visibility over the majority of the ground surface, the survey area will need to be re-cultivated. Depth of ploughing should not exceed the depth of previous ploughing but should be deep enough to ensure total topsoil exposure. Disking also can be employed to improve visibility, as determined by the consulting archaeologist. However, strip-ploughing is not an acceptable alternative to full field ploughing, unless under exceptional circumstances (eg. very rocky terrain). All recently ploughed fields must be weathered by one heavy rain or several light rains prior to final assessment survey.

Surface survey transects on ploughed fields or other open terrain shall be spaced at a maximum of 10 metre intervals. This interval must be reduced to 5 metres or less in areas exhibiting a high potential for containing archaeological remains.

Test Pit Survey:

Where surface survey cannot be accomplished (due to ground cover such as woodlots, orchards, heavy brush or long-used pasture, etc.), a shovel test pit survey strategy shall be employed. All test pits shall be excavated to subsoil, and pit fill must be screened through mesh no greater than 6 mm in size. Unless specific circumstances prohibit it, all test pits shall be back filled.

Test pit survey transects and intervals between test pits shall be spaced at a maximum of 10 metres. This transect and interval spacing must be reduced to 5 metres or less in areas exhibiting a high potential for containing archaeological remains. Random sampling of test pits is inadequate for areas of moderate or high potential.

Encountering Archaeological Remains During Stage 2

When archaeological remains are encountered during the Stage 2 assessment, survey must be intensified around the area of the find to determine if it is isolated or is part of a larger artifact scatter. If artifacts found during Stage 2 are isolated finds or part of a site that obviously will not require any further investigations, artifact locations shall be mapped and all diagnostics shall be retained.

However, if the artifact is part of a larger surface scatter, or associated with multiple artifact-yielding test pits, then additional (Stage 3) documentation of this location will be required.

STAGE 3 - ARCHAEOLOGICAL SITE DOCUMENTATION

Stage 3 investigations occur when archaeological sites are located during survey. Normally these investigations will occur immediately following or as a distinct part of the Stage 2 assessment. Stage 3 investigations must obtain information about the spatial dimensions, artifact frequencies and cultural affiliation(s) of the site in question. Ultimately these data will be used to evaluate the site's significance and determine the appropriate impact mitigation strategy. The method of investigation should be appropriate to the type and amount of cultural remains present, and appropriate to the current field conditions at the site. The rationale for Stage 3 investigations must be stated in the assessment report.

Field conditions will determine the nature of Stage 3 documentation. In cultivated fields, mapping the entire extent of surface artifact distributions is required. This mapping must be referenced to a permanent datum which will remain stable through Stage 4 mitigation work, and recorded at a scale sufficient to show the location of individual artifacts.

Sites found during test pitting will require excavating an intensified test pit grid around the artifact yielding pit (2.5 m interval or less). All fill will be screened, and test pits within the intensified grid mapped (both artifact yielding and negative), and tied into a permanent datum.

Additionally:

- For most sites it will be necessary to determine the nature of ploughzone and subsoil artifact deposits and/or the potential for the presence of cultural features, stratigraphy or buried midden deposits during Stage 3 investigations. This should be accomplished through the excavation of strategically placed test units (minimum 1 metre square) over the site area. Placement of units on plough-disturbed lithic scatters should coincide with both the extent of the artifact scatter, and areas of surface artifact concentration. For sites found through test pitting, units should encompass both the artifact yielding test pits, and the apparent, overall extent of the site area.

-
- The Stage 3 documentation of an historic site should include a review of information relating to the history of the property (eg. title search, assessment rolls, census, etc.).
 - Where Stage 3 documentation and mapping have been conducted on a site in a cultivated field, and the results are deemed to indicate that the site will require mitigation, then diagnostic artifacts shall be retained, while some of the lithic debris, fire-cracked rock, faunal remains, etc. can be left in place to assist in relocating the site at the start of Stage 4 mitigation work.
 - Where Stage 3 activities have been conducted, and the results do not warrant further investigations, then all artifacts shall be retained. In the case of nineteenth century Euro-Canadian sites, a representative sample of artifacts may be retained, although all temporally diagnostic artifacts (refined ceramics, pipes, buttons, etc.) should be kept.
 - All artifact recoveries shall be bagged in the conventional manner and documented according to provenience (eg. surface locality, or transect line and test pit number). In the lab artifacts should be processed in accordance with standard procedures for cleaning and cataloguing. Minimally, all artifacts or batches of artifacts must be clearly labelled with the Borden Number assigned to the site.

SECTION 3

ARCHAEOLOGICAL ASSESSMENTS: REPORTING REQUIREMENTS

GENERAL REQUIREMENTS

At the conclusion of the assessment (encompassing all Stage 1, 2 and 3 activities), the consulting archaeologist must prepare an Archaeological Assessment Report. Copies of this report shall be submitted to the appropriate Development Plans Review Officer of the Archaeology & Heritage Planning Unit, Cultural Programs Branch, Ministry of Culture, Tourism & Recreation. Letter reports or summary statements of assessment activities are not acceptable. Reports submitted for assessments where archaeological sites of potential significance have been found but have not been subject to Stage 3 documentation are considered incomplete. Whenever possible, MCTR staff must be able to review the results of Stage 3 documentation activities, prior to issuing final clearance or providing comments on Stage 4 mitigation recommendations.

If an assessment report is also intended to meet the consulting archaeologist's licence obligations, separate copies must be sent to the Archaeological Licencing Office of the Ministry. As per licence conditions and the Ontario Heritage Act, all sites examined as a result of assessment activities must be reported to MCTR on site registration or site update forms. These forms should be submitted directly to the Archaeological Sites Data Co-ordinator, or accompanied with, but separate from, the consulting archaeologist's licence report submission.

ASSESSMENT REPORT FORMAT

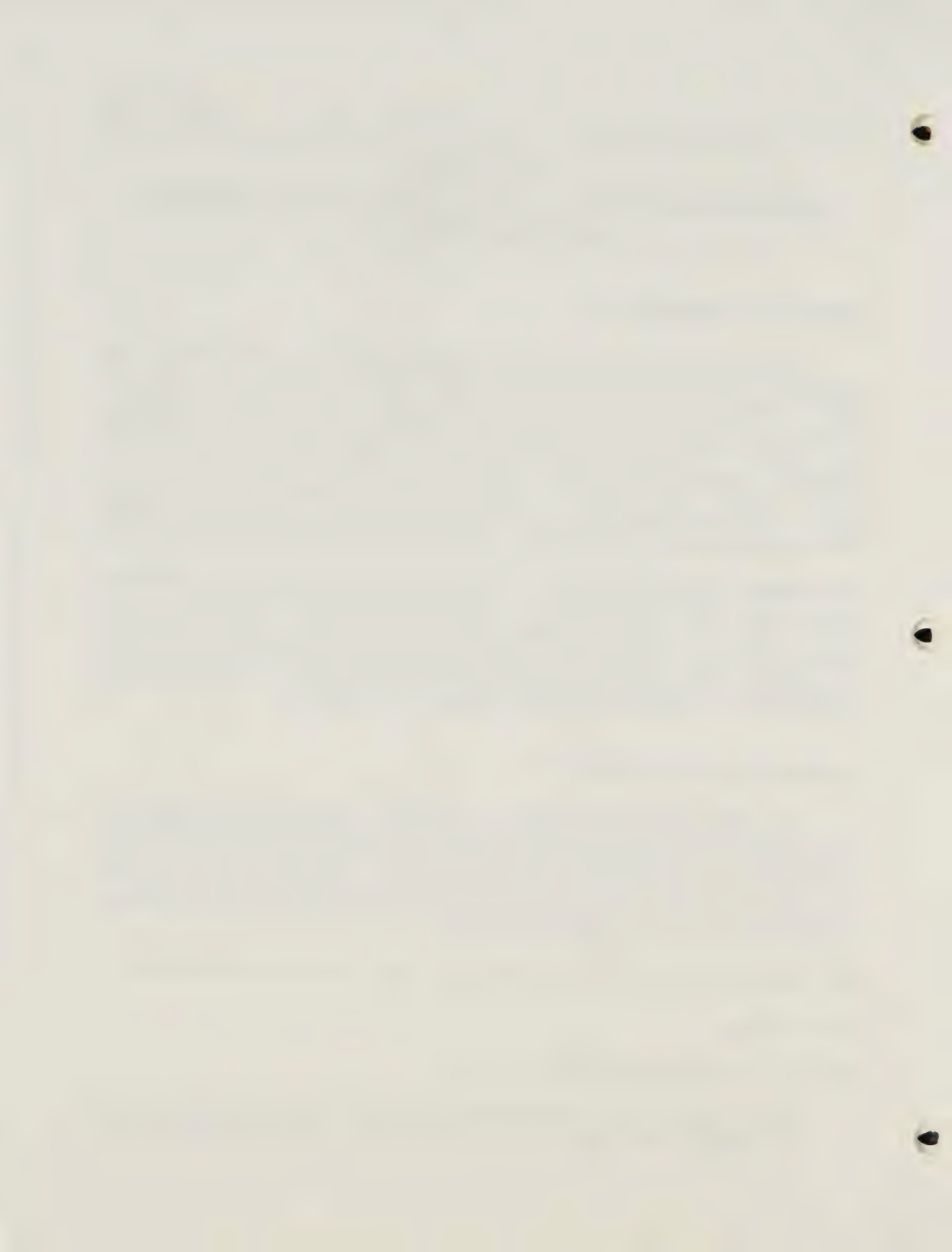
The critical elements of an assessment report include: 1) the Cover Page, 2) Introduction and Background Research, 3) Assessment Methodology, 4) Archaeological Findings, 5) Graphics, 6) Evaluation of Site Significance, and 7) Recommendations. Additionally, assessment reports can include an executive summary section, copies of site registrations forms and contract information sheets, a cultural-historical overview of the study area, and any other information as deemed appropriate by the consulting archaeologist.

The following outlines the minimal requirements for each section of the assessment report:

1) Cover Page

This section must include the following information:

- The municipal development file number ("T" number of subdivision) and property name (eg. "Pleasant View Estates"), or other reference which identifies the project type (e.g.



"Whistle-Bare Phase 2 Quarry Pit Expansion").

- Location of Project (Municipality, lot and concession or street address)
- Name and address of the client.
- Name of the consultant or consulting firm, and the consultant's project number.
- Archaeological licence number.
- Date of report completion.

2) Introduction And Background Research

This section must include the following information:

- Names of the field director, survey crew, data analysts and report authors (this can be provided on a separate, project personnel page).
- Purpose of the project.
- Results of Stage 1 investigations and the rationale for determining areas of potential on the subject property.
- Dates and duration of the field activities conducted (distinguishing between Stage 2 and Stage 3 dates if not conducted at the same time).

3) Assessment Methodology

This section must provide a written description of:

- The environmental setting and landscape of the property, including ground cover and weather conditions during survey.
- Any prohibitive field conditions limiting area surveyed (disturbances, low, wet areas, etc.).
- The Stage 2 field methods employed during the assessment, including:
 - The total area surveyed, with a breakdown by technique and by interval spacing (pedestrian survey, test pitting, etc. at 10, 5 or less metre intervals);
 - Any intensification to interval spacing when archaeological remains were encountered during survey.
- Any deviation from the minimum standards defined in these guidelines, including explicit

identification and justification.

- As well, if no artifacts were encountered during the Stage 2 investigations of the subject property, this should be explicitly stated in this section of the report.

4) Archaeological Findings

For all sites encountered, a description must be provided of:

- The environmental setting for each site.
- The extent of intensified (Stage 3) investigations conducted during survey, including:
 - methods used to define and map site limits;
 - extent of surface artifact collection activities conducted;
 - total area and depth of any excavations conducted, and nature of artifact yields.
- The recovered artifact and ecofact assemblage for each site, including catalogues.
- The depositional history of the site, including disturbances, and a reconstruction of the site's occupational chronology to the extent that the recovered data will allow.
- The spatial and temporal relationship of the site to other sites in the region.

5) Graphics

All Assessment Reports must include the following:

- A map depicting the regional location of the subject property.
- A development project map (e.g. draft plan map of subdivision, pipeline corridor, etc.), or equally scaled and detailed equivalent, depicting:
 - variations in ground cover and topography;
 - zones of archaeological potential;
 - extent of property investigated by pedestrian survey (distinguishing between areas pedestrian surveyed at different survey intervals);
 - extent of property investigated by test pitting (distinguishing between areas test pitted at different survey transects and/or intervals);
 - extent of property not subject to field investigations (eg. areas of disturbance).
- The same development project map, or a second equivalent map, depicting the exact location of all archaeological sites and findspots recovered.

- Maps of the archaeological sites subject to detailed Stage 3 investigations, depicting:
 - physical setting (eg. topography, ground cover, etc.);
 - site extent, including mapped artifact locations and/or artifact-yielding test pits;
 - location of all test excavation units in relation to surface finds/positive test pits;
 - location of permanent datum(s).

Where conditions allow, this information should be tied into development plan features (eg. lot survey stakes, utility corridor centre-lines, etc.).

- Photographs of any land disturbance or exceptionally difficult field conditions encountered during survey.
- Photographs and/or drawings of representative and diagnostic artifacts.

6) Evaluation Of Site Significance

Evaluating the significance of the site(s) found and investigated during Stage 2 and 3 assessment work will determine the need for and nature of Stage 4 mitigation work. As such, a statement of significance for the site(s) found during survey must be included in the assessment report. At a minimum, the criteria used to evaluate significance should address both information potential and the perceived value for the site(s) in question.

Information Potential:

This refers to the potential contribution a site may make to local, regional or provincial cultural history. Determining a site's information potential includes an examination of the following attributes:

- Site Integrity (extent of past disturbances to the site, extent of a multi-component mix to deposits, etc.).
- Rarity or Representativeness (locally, regionally and provincially).
- Cultural-Temporal Affiliations (age, aboriginal/European pioneer associations, etc.).
- Potential Data Productivity (settlement and artifact distribution data, subsistence and ecological data, cultural behaviour, artifacts yields, etc.).
- Site Context (temporal and spatial, inter-site relationships, demonstrated relationship to known historic events, people, etc.).
- Potential for the presence of human remains.

Perceived Value Potential:

This refers to the perceived value a site may have to the local community or specific interest groups. A site having a low information potential may still be of significance if it is of interest to the local community, heritage groups, or specific cultural groups; or if the site has the potential to be used as part of an education or economic opportunity.

7) Report Recommendations

A final component of the Assessment Report is the preparation of recommendations arising from the survey findings and, where applicable, site investigations.

- If no sites were found during survey, or if those sites found do not warrant further investigation, a recommendation should be included requesting that the property be cleared of any further archaeological concerns.
- If significant archaeological remains were identified, a detailed impact mitigation strategy should be provided. If site avoidance (preservation) is recommended, possible long and short term avoidance strategies available for the site should be provided. If salvage excavation is proposed, recommendations must include an explicit excavation strategy appropriate to the site's significance. In lieu of Stage 4 guidelines, avoidance and excavation mitigation strategies proposed for significant archaeological sites should be reviewed with MCTR Archaeology & Heritage Planning staff, to insure Ministry support for the recommendations.
- If artifacts have been collected during the assessment, a recommendation regarding the short and long term care and disposition of the collections, consistent with the licence holder's obligations under the Ontario Heritage Act and Ontario Regulation 212/82, should be included.

In addition, all reports must contain the following recommendations:

- Should deeply buried archaeological remains be found on the property during construction activities, MCTR should be notified immediately.
- In the event that human remains are encountered during construction, the proponent should immediately contact both MCTR, and the Registrar or Deputy Registrar of the Cemeteries Regulation Unit of the Ministry of Consumer and Commercial Relations, (416) 326-8392.





FOR YOUR INFORMATION

Consulting archaeologists and development proponents should also be aware of these additional MCTR guidelines related to cultural heritage resource conservation in the Ontario land use planning process:

- *Guideline for Preparing the Cultural Heritage Resource Component of Environmental Assessments.* Ministry of Energy and the Environment & Ministry of Culture, Tourism & Recreation, 1992.
- *Guidelines for the Conservation of Cultural Heritage Resources Within the Land Use Planning Process.* Ministry of Culture, Tourism & Recreation, in production.

Copies can be obtained from the Archaeology and Heritage Planning offices of MCTR.

FOR YOUR INFORMATION

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